

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims, in the application:

**LISTING OF CLAIMS:**

Claim 1 (withdrawn) A membrane vesicle that comprises a recombinant molecule of the human major Histocompatibility complex.

Claim 2 (withdrawn) The vesicle according to claim 1, in which said recombinant molecule of the major Histocompatibility complex is a class II molecule.

Claim 3 (withdrawn) The vesicle according to claim 2, in which said recombinant class II molecule of the major Histocompatibility complex is an  $\alpha$  chain.

Claim 4 (withdrawn) The vesicle according to claim 2, in which said recombinant class II molecule of the major Histocompatibility complex comprises an  $\alpha$  chain and a  $\beta$  chain.

Claim 5 (withdrawn) The vesicle according to claims 2, 3, or 4, in which said recombinant class II molecule of the major Histocompatibility complex is chosen from among the serotypes DR1, DR2, DR3, DR4, DR5, DR6, DR7, DR8, DR9, DR10, DR11, DR12 and DR13.

Claim 6 (withdrawn) The vesicle according to claim 1, in which said recombinant molecule of the major Histocompatibility complex is a class I molecule.

Claim 7 (withdrawn) The vesicle according to claim 1, further comprising a complex between a defined peptide and said recombinant molecule of the major Histocompatibility.

Claim 8 (withdrawn) The vesicle according to claim 1, which further comprises one or more heterologous molecules of interest.

Claim 9 (withdrawn) The vesicle according to claim 1, which further comprises a peptide or a recombinant protein enabling its purification.

Claim 10 (withdrawn) The vesicle according to claim 1, which further comprises a tracer.

Claim 11 (withdrawn) The vesicle according to claim 1, which is essentially free of molecules of the endogenous MHC.

Claim 12 (currently amended) An isolated membrane vesicle, wherein said vesicle is secreted from a mastocyte or mastocyte derived cell and comprises one or more heterologous recombinant class II molecules of the major histocompatibility complex.

Claim 13 (cancelled)

Claim 14 (cancelled)

Claim 15 (previously presented) The isolated vesicle according to claim 12, further comprising a heterologous molecule of interest selected from the group consisting of a molecule of the major histocompatibility complex, a receptor ligand, a ligand receptor, a nucleic acid, a pharmacological product, a tracer, and a purification peptide.

Claim 16 (withdrawn) A membrane vesicle that comprises a recombinant fusion molecule between a polypeptide of interest and a signal sequence.

Claim 17 (withdrawn) An exosome-producing cell, comprising one or more recombinant nucleic acids coding for a molecule of the major Histocompatibility complex.

Claim 18 (withdrawn) The cell according to claim 17, in which said cell is a mastocyte cell.

Claim 19 (withdrawn) The cell according to claim 18, in which said mastocyte cell is derived from a mastocyte line of a basophilic leukemia.

Claim 20 (withdrawn) The cell according to claim 17, in which said molecule is one or more of an MHC class I molecule, or an MHC class II  $\alpha$  or  $\beta$  chain molecule.

Claim 21 (withdrawn) A method for producing an exosome containing a defined recombinant molecule, comprising steps of:

culturing a mastocyte or mastocyte-derived cell containing a recombinant nucleic acid coding for said defined recombinant molecule; and

recovering the exosomes produced by said cells, those exosomes containing said defined recombinant molecule.

Claim 22 (withdrawn) The method according to claim 21, further comprising the step of stimulating said cells to induce or increase, or both, the secretion of exosomes.

Claim 23 (withdrawn) The method according to claim 21, in which said defined recombinant molecule is exposed outside the exosome, or is included, wholly or in part, in the cytosolic fraction of the exosome.

Claim 24 (withdrawn) The method according to claim 21, in which said recombinant molecule is a molecule of the major Histocompatibility complex, an antigenic molecule, a receptor ligand, a ligand receptor, a purification peptide, or any other polypeptide of interest.

Claim 25 (withdrawn) The method according to claim 21, in which said nucleic acid also comprises a region encoding a membrane-specific signal sequence.

Claim 26 (withdrawn) A method for preparing an exosome containing a peptide-MHC complex of defined composition, comprising the steps of:

culturing an exosome-producing cell containing one or more recombinant nucleic acids coding for a defined recombinant molecule of the MHC and a nucleic acid containing a region coding for a defined recombinant peptide;

stimulating said cells to induce release of the exosomes; and

recovering said exosomes produced by said cells, these exosomes expressing on their surface said defined recombinant molecule of the MHC associated with said recombinant peptide.

Claim 27 (withdrawn) A method for preparing an exosome containing a peptide-MHC complex of defined composition, comprising the steps of:

culturing an exosome-producing cell containing one or more recombinant nucleic acids coding for a defined recombinant molecule of the MHC and a nucleic acid containing a region coding for a defined recombinant peptide;

stimulating said cells to induce release of the exosomes; and

recovering said exosomes produced by said cells, these exosomes expressing on their surface said defined recombinant molecule of the MHC associated with said recombinant peptide.

Claim 28 (withdrawn) The method according to claim 27, in which said nucleic acid coding for the recombinant peptide codes for a derivative of the li invariant chain, in which the CLIP region has been deleted and substituted by said peptide.

Claim 29 (withdrawn) The method according to claim 26 or 27, in which said producer cell is a mastocyte or mastocyte-derived cell.

Claim 30 (withdrawn) The method according to claim 26 or 27, in which said producer cell is essentially free of molecules of the endogenous MHC.

Claim 31 (withdrawn) A method for modifying the composition of an exosome, comprising the steps of:

inserting into an exosome-producing cell a nucleic acid coding for a defined molecule, and a signal sequence targeting cellular membrane compartments; and

recovering exosomes from said cell.

Claim 32 (previously presented) A composition comprising one or more isolated membrane vesicles according to claim 12 or 15.

Claim 33 (withdrawn) A method of using the vesicle of claim 1, 12, or 16 for the production of polyclonal antibodies or monoclonal antibodies or both.

Claim 34 (withdrawn) A method for producing antibodies, comprising immunizing an animal with a vesicle according to claim 1, and recovering the antibodies or cells producing antibodies or involved in the immunity response, or both.

Claim 35 (withdrawn) The method according to claim 34, in which said antibodies are monoclonal antibodies.

Claim 36 (withdrawn) A method of using an antibody obtained according to claim 34, or of a fragment of said antibody, for the detection, in a biological sample, of the presence of corresponding specific antigens.

Claim 37 (withdrawn) A method of using an antibody produced according to claim 34, or a fragment of said antibody, or of a membrane vesicle that comprises a recombinant molecule of the human major Histocompatibility complex for the preparation of a therapeutic composition intended to inhibit the interaction between the receptor of a T-lymphocyte and the MHC-peptide complex for which it is specific.

Claim 38 (withdrawn) A method of using a membrane vesicle according to claim 1, 12 or 16 for the detection of partners specific for a protein molecule in a biological sample.

Claim 39 (withdrawn) The method of claim 38, in which said membrane vesicle carries a MHC-peptide complex for the detection of T-lymphocytes specific to this complex in a biological sample.

Claim 40 (withdrawn) The method of claim 38, in which said membrane vesicle carries a TcR receptor for the detection of the peptide-MHC complexes specific to this receptor in a biological sample.

Claim 41 (withdrawn) The method of claim 38, in which said membrane vesicle carries a ligand receptor for the detection of the presence of said ligand in a biological sample.

Claim 42 (withdrawn) a method for the detection of the presence of T-lymphocytes specific to antigen-MHC complexes in a biological sample, comprising placing said sample in contact with an exosome labeled according to claim 51, containing said antigen-MHC complex, and evidencing the labeling of T-lymphocytes in said sample.

Claim 43 (withdrawn) A method of using the vesicle according to claim 7 for clonal amplification or *ex vivo* stimulation of T-lymphocytes, or both, wherein said T-lymphocytes are cytotoxic or auxiliary T-lymphocytes, or both.

Claim 44 (withdrawn) A method of using a vesicle according to claim 1, 12, or 16 for the preparation of a composition intended to deliver said molecule to a cell.

Claim 45 (withdrawn) A composition containing one or more exosomes immobilized on a support.

Claim 46 (withdrawn) A method of using a membrane vesicle according to claim 1, 12 or 16, wherein said membrane vesicle is immobilized on a support, for the purification of cells.

Claim 47 (withdrawn) The vesicle according to claim 5, in which said serotype is selected from the group consisting of DR1, DR2, DR3, DR4, DR5, DR6 and DR7.

Claim 48 (withdrawn) The method of claim 35, in which said monoclonal antibodies are specific for the MHC-peptide association.

Claim 49 (withdrawn) The cell of claim 19, in which said cell is derived from an RBL cell line.

Claim 50 (withdrawn) The cell of claim 49, in which said RBL cell line is RBL-2H3.

Claim 51 (withdrawn) The complex of claim 7, wherein said defined peptide is an antigen.

Claim 52 (currently amended) The isolated membrane vesicle according to claim ~~12~~ 15, wherein said heterologous molecule of interest is present on the surface of the vesicle.

Claim 53 (cancelled)

Claim 54 (currently amended) The isolated membrane vesicle according to claim ~~53~~12, wherein said recombinant class II molecule of the major histocompatibility complex is an  $\alpha$  chain.

Claim 55 (currently amended) The isolated membrane vesicle according to claim ~~53~~12, wherein said recombinant class II molecule of the major histocompatibility complex comprises an  $\alpha$  chain and a  $\beta$  chain.

Claim 56 (currently amended) The isolated membrane vesicle according to claim ~~53~~12, claim 54 or claim 55, wherein said recombinant class II molecule of the major histocompatibility complex is chosen from among the serotypes DR1, DR2, DR3, DR4, DR5, DR6, DR7, DR8, DR9, DR10, DR11, DR12, and DR13.

Claim 57 (withdrawn) The isolated membrane vesicle according to claim 14, wherein said recombinant molecule of the major histocompatibility complex is a recombinant class I molecule.

Claim 58 (currently amended) The isolated membrane vesicle according to claim ~~14~~ 12, further comprising a complex between a defined peptide and said heterologous recombinant class II molecule of the major histocompatibility complex.

Claim 59 (currently amended) The isolated membrane vesicle according to claim 56, wherein said heterologous recombinant class II molecule of the major histocompatibility complex is the serotype DR1.